

What is claimed is:

1. A method of automatically registering a domain name, the method comprising:

- (a) receiving name information of a network having a host;
- (b) creating a link local address of the host and determining whether the created link local address has already been used;
- (c) if the created link local address has not been used, extracting an interface ID used to determine the host, from the created link local address;
- (d) creating a domain name using the extracted interface ID and the received name information of the network; and
- (e) registering the created domain name in a domain name server.

2. The method of claim 1, further comprising:

- (f) receiving the created domain name through a message; and
- (g) if the created domain name is already present in the domain name server, notifying the host of a presence of the created domain name so that a new domain name is created.

3. The method of claim 2, wherein in step (f), the created domain name is received through a neighbor solicitation (NS) message.

4. The method of claim 2, wherein in step (g), if the created domain name is already present in the domain name server, the presence of the created domain name is recorded to a neighbor advertisement (NA) message,

and the NA message is transmitted to the host to control the host to create a new domain name.

5. The method of claim 1, wherein the name information of the network corresponds to a suffix of the domain name of the network having the host.

6. The method of claim 5, wherein in step (d), “interface ID.suffix” is created as the domain name, wherein “interface ID” corresponds to the extracted interface ID.

7. The method of claim 1, wherein in step (a), the name information of the network is received through a router advertisement (RA) message.

8. The method of claim 1, wherein in step (b), it is determined whether the created link local address has already been used using duplicate address detection (DAD).

9. The method of claim 1, wherein in step (c), a lower 64 bits of the created link local address, except for its prefix, is extracted as the interface ID.

10. The method of claim 1, wherein the host is an IPv6 host.

11. A system of automatically registering a domain name, the system comprising:

a host, which receives name information of a network, creates a domain name, and outputs the created domain name; and

an auto-registration server, which transmits the name information of the network to the host, receives the created domain name, and registers the created domain name in a domain name server.

12. The system of claim 11, wherein the host comprises:

a link local address creating unit, which creates a link local address;

an interface ID extracting unit, which receives the created link local address and extracts an interface ID from the received link local address; and

a domain name creating unit, which creates a domain name using the extracted interface ID.

13. The system of claim 12, wherein the link local address creating unit creates the link local address, determines whether the created link local address is already present in the domain name server using duplicate address detection (DAD), and if the created link local address is already present in the domain name server, creates a new link local address.

14. The system of claim 12, wherein the interface ID extracting unit extracts the lower 64 bits of the created link local address, except for a prefix, as the interface ID.

15. The system of claim 11, wherein the auto-registration server comprises:

a network name information transmitting unit, which transmits the name information of the network to the host;

a domain name managing unit, which receives the domain name, registers the received domain name in a domain name server, and if the received domain name is already present in the domain name server, notifies the host that the received domain name is already present in the domain name server; and

a domain name information storing unit, which stores the registered domain name information a predetermined amount of time.

16. The system of claim 15, wherein the network name information transmitting unit transmits the name information related to the network through a router advertisement (RA) message.

17. The system of claim 15, wherein the domain name managing unit receives the created domain name through a neighbor solicitation (NS) message and if the received domain name is already present in the domain name server, records the presence of the received domain name to a neighbor advertisement (NA) message, transmits the NA message to the host in order to control the host to create a new domain name.

18. The system of claim 11, wherein the host is an IPv6 host.

19. A computer readable recording medium having embodied thereon a method of automatically registering a domain name, wherein the method comprises:

- (a) receiving name information of a network having a host;
- (b) creating a link local address of the host and determining whether the created link local address has already been used;
- (c) if the created link local address has not been used, extracting an interface ID used to determine the host from the created link local address;
- (d) creating a domain name using the extracted interface ID and the received name information of the network; and
- (e) registering the created domain name in a domain name server.